SEQUENCE LISTING

<110> Donoho, Gregory Hilbun, Erin

<120> Novel Human Membrane Proteins and Polynucleotides Encoding the Same

<130> LEX-0129-USA

<150> US 60/180,414

<151> 2000-02-04

<160> 5

<170> FastSEO for Windows Version 4.0

<210> 1

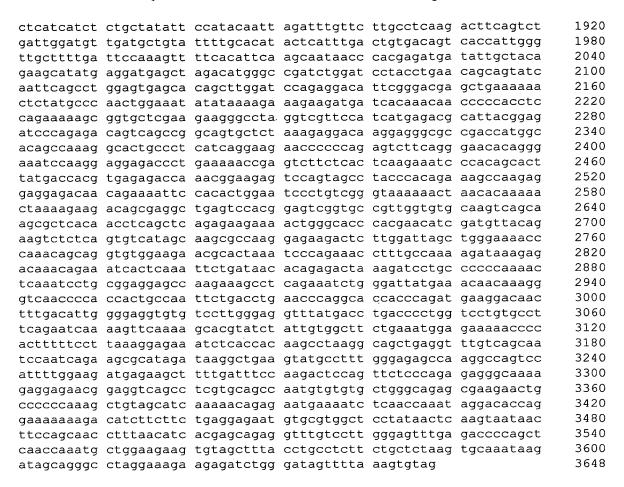
<211> 3648

<212> DNA

<213> Homo sapiens

<400> 1

60 atgggagcca tggcttaccc cttactcctc tgcctcctgc ttgctcagct gggattggga gctgttggcg ccagccgcga cccccaagga cggccggatt cccctcgaga gaggaccccg 120 180 aaggggaage egeacgeeca geageegggt egageetetg eeteggaete eteggeteee 240 tggagccgct ccaccgatgg caccatcttg gcgcagaaac tcgccgagga ggtgcccatg 300 gacgtggcct cttacctcta caccggggac tcccaccagc tgaagcgagc caactgctcc 360 qqccqctacq aqttqqcqqq cctqccqqqq aaqtqqccaq ccctggccag cgcgcacccc 420 teettqeace qqqeqetqqa cacactqaca cacqeeacea aetteetcaa egtgatgetg 480 cagagcaata agtcgcggga gcagaacttg caggacgacc tggattggta ccaggcgctg gtgtggagcc ttctggaggg cgagcccagc atctcccggg cggccatcac cttcagcacc 540 600 qattcqctqt ccqcaccqqc cccacaqqtc ttcctccagg ccacgcgcga ggagagccgc atcetgetee aagacetgte etecteegea eeceacetgg eeaacgeeae tetggagaee 660 720 gagtggttcc acggcctccg gcgcaagtgg aggccccact tacaccgccg cggccccaat 780 caggggcccc ggggcctggg ccacagctgg cggcgcaagg acgggctcgg cggggacaag 840 agccacttca agtggtctcc gccttatctg gagtgcgaga acgggagtta caagcccggg 900 tggctggtta ctctttcctc tgccatctac gggttgcagc ctaacctggt cccggaattc aggggtgtca tgaaagttga cataaatctt cagaaagtgg acattgacca atgctcaagt 960 gatggctggt tttcaggaac tcataaatgc cacctcaaca attcagagtg tatgccaatt 1020 aaaggcctag gattcgttct tggagcctat gagtgcattt gcaaagcagg attctatcat 1080 1140 cctggagtct taccagtgaa caactttcgg agaaggggtc cggatcagca tatttcagga 1200 agtacaaaag atgtgtcaga agaagcctat gtctgcctac cttgcaggga gggctgcccc 1260 ttctqtqctq atqacaqccc atgcttcgtc caggaagata agtatttacg acttgccatc 1320 atttccttcc aaggectgtg tatgetgete gacttegtta geatgetggt ggtetaceae tttcgcaaag caaagagcat ccgggcatcg ggccttatcc tgttggaaac gatccttttt 1380 ggatctctgc tcctatactt tccagttgtt attttgtact ttgagccaag cacatttcgc 1440 1500 tgtattctcc taagatgggc tcgtcttctc ggttttgcta ctgtttacgg aactgtcact 1560 ctcaaacttc acagggtttt gaaggtgttt ctttcacgaa cggctcaacg aattccatat atgactggcg gacgggtcat gaggatgctg gcagtaatac tcttggtagt gttttggttt 1620 1680 ctcattgqct qqacttcatc tqtqtqccaq aatttqqaqa aacaqatttc acttattgqc caggggaaaa catccgatca cctcatcttc aatatgtgcc tcattgaccq ctgggactac 1740 1800 atgacagcag ttgctgaatt tttattcctc ttgtggggtg tttatctctg ctatgcagtg 1860 cggacagtcc catcggcatt ccatgagccc cgctatatgg ctgttgcagt tcacaatgag



<210> 2 <211> 1215 <212> PRT <213> Homo sapiens

<400> 2

Met Gly Ala Met Ala Tyr Pro Leu Leu Cys Leu Leu Leu Ala Gln 10 Leu Gly Leu Gly Ala Val Gly Ala Ser Arg Asp Pro Gln Gly Arg Pro 25 Asp Ser Pro Arg Glu Arg Thr Pro Lys Gly Lys Pro His Ala Gln Gln Pro Gly Arg Ala Ser Ala Ser Asp Ser Ser Ala Pro Trp Ser Arg Ser 55 Thr Asp Gly Thr Ile Leu Ala Gln Lys Leu Ala Glu Glu Val Pro Met 75 Asp Val Ala Ser Tyr Leu Tyr Thr Gly Asp Ser His Gln Leu Lys Arg 90 Ala Asn Cys Ser Gly Arg Tyr Glu Leu Ala Gly Leu Pro Gly Lys Trp 105 Pro Ala Leu Ala Ser Ala His Pro Ser Leu His Arg Ala Leu Asp Thr 120 Leu Thr His Ala Thr Asn Phe Leu Asn Val Met Leu Gln Ser Asn Lys 135 Ser Arg Glu Gln Asn Leu Gln Asp Asp Leu Asp Trp Tyr Gln Ala Leu

															1.00
145		0	.	Ŧ	150	C1	C1	D	C	155	C	7	ת ד ת	ת ד ת	160
Val	Trp	Ser	Leu	ьеи 165	GIU	GIÀ	GIU	Pro	5er 170	TIE	ser	Arg	Ala	175	TTE
Thr	Phe	Ser	Thr		Ser	Leu	Ser	Ala		Ala	Pro	Gln	Val		Leu
1111			180		501		-	185	0				190		
Gln	Ala	Thr		Glu	Glu	Ser	Arq		Leu	Leu	Gln	Asp		Ser	Ser
		195	,				200					205			
Ser	Ala	Pro	His	Leu	Ala	Asn	Ala	Thr	Leu	Glu	Thr	Glu	Trp	Phe	His
	210					215					220				
Gly	Leu	Arg	Arg	Lys	Trp	Arg	Pro	His	Leu	His	Arg	Arg	Gly	Pro	Asn
225					230					235					240
Gln	Gly	Pro	Arg	_	Leu	Gly	His	Ser		Arg	Arg	Lys	Asp		Leu
6 1	~ 1	7	.	245		Db -	T	m	250	D	D o	Ш	T 0	255	C···
GTA	Gly	Asp	ьуs 260	ser	HIS	Pne	ьуѕ	265	ser	PLO	PLO	тÀг	270	GIU	Cys
Glu	Asn	Glv		Tur	T.vs	Pro	Glv		T.e11	Val	Thr	Leu		Ser	Ala
GIU	ASII	275	Der	ı yı	цуз	110	280	тър	шец	vai		285	001		
Ile	Tyr		Leu	Gln	Pro	Asn		Val	Pro	Glu	Phe		Gly	Val	Met
	290					295					300		-		
Lys	Val	Asp	Ile	Asn	Leu	Gln	Lys	Val	Asp	Ile	Asp	Gln	Cys	Ser	Ser
305					310					315					320
Asp	Gly	Trp	Phe		Gly	Thr	His	Lys	Cys	His	Leu	Asn	Asn		Glu
				325					330	_			_	335	_
Cys	Met	Pro		Lys	Gly	Leu	Gly		Val	Leu	Gly	Ala		Glu	Cys
71 -	0	T	340	C1	Dh.	Ш	114.0	345	C1	1701	T 0.11	Dwo	350	7.00	7 cn
ile	Cys	ьуs 355	Ата	GTÀ	Pne	Tyr	360	Pro	сту	vai	Leu	365	val	ASII	ASII
Dho	Arg		Δra	Glv	Pro	Asn		His	Tle	Ser	Glv		Thr	T.vs	Asp
FIIC	370	ALG	ALG	OTY	110	375	0111	1115		DCI	380	001		ביים	пор
Val	Ser	Glu	Glu	Ala	Tyr		Cys	Leu	Pro	Cys	Arg	Glu	Gly	Cys	Pro
385					390		-			395	_				400
Phe	Cys	Ala	Asp	Asp	Ser	Pro	Cys	Phe	Val	Gln	Glu	Asp	Lys	Tyr	Leu
				405					410					415	
Arg	Leu	Ala		Ile	Ser	Phe	Gln		Leu	Cys	Met	Leu		Asp	Phe
	_		420			_		425	_	_		-	430	-1	
Val	Ser		Leu	Val	Val	Tyr		Phe	Arg	гàг	Ата	Lуs 445	Ser	тте	Arg
71.	C 0 X	435	T 011	тіо	Ť OU	T 011	440	Thγ	Tlo	T 011	Pho		Sar	T All	T. 211
Ата	Ser 450	GTÀ	ьeu	шe	Leu	455	GIU	1111	116	ьeu	460	СТУ	261	пеа	пеп
T.en		Phe	Pro	Val	Val		Leu	Tvr	Phe	Glu		Ser	Thr	Phe	Arg
465	- 7 -	2 110	110		470			-1-		475					480
	Ile	Leu	Leu	Arg	Trp	Ala	Arg	Leu	Leu	Gly	Phe	Ala	Thr	Val	Tyr
-				485			_		490					495	
Gly	Thr	Val	Thr	Leu	Lys	Leu	His	Arg	Val	Leu	Lys	Val	Phe	Leu	Ser
			500					505					510		
Arg	Thr		Gln	Arg	Ile	Pro		Met	Thr	Gly	Gly		Val	Met	Arg
	_	515		-1.	T	T	520	**- 1	Db -	m	Db -	525	T1.	C1	TI 2020
Met	Leu	Ala	vai	TIE	Leu	ьеи 535	vaı	vaı	Pne	Trp	540	Leu	тте	GLY	пр
Thr	530 Ser	Sar	V=1	Cve	Gln		Len	Glu	T.vs	Gln		Ser	I.e.ii	Tle	Glv
545	SET	Set	v CL T	Cys	550	11011	LCu	JIU	دړـ	555		~ O L	Lou		560
	Gly	Lvs	Thr	Ser		His	Leu	Ile	Phe		Met	Cys	Leu	Ile	
	1			565	- 1-	_		-	570			-		575	•
Arg	Trp	Asp	Tyr	Met	Thr	Ala	Val	Ala	Glu	Phe	Leu	Phe	Leu	Leu	Trp
			580					585					590		
Gly	Val	Tyr	Leu	Cys	Tyr	Ala	Val	Arg	Thr	Val	Pro	Ser	Ala	Phe	His

595 600 605 Glu Pro Arg Tyr Met Ala Val Ala Val His Asn Glu Leu Ile Ile Ser 615 Ala Ile Phe His Thr Ile Arg Phe Val Leu Ala Ser Arg Leu Gln Ser 630 635 Asp Trp Met Leu Met Leu Tyr Phe Ala His Thr His Leu Thr Val Thr 650 Val Thr Ile Gly Leu Leu Ile Pro Lys Phe Ser His Ser Ser Asn 665 Asn Pro Arg Asp Asp Ile Ala Thr Glu Ala Tyr Glu Asp Glu Leu Asp 680 Met Gly Arg Ser Gly Ser Tyr Leu Asn Ser Ser Ile Asn Ser Ala Trp 700 695 Ser Glu His Ser Leu Asp Pro Glu Asp Ile Arg Asp Glu Leu Lys Lys 715 710 Leu Tyr Ala Gln Leu Glu Ile Tyr Lys Arg Lys Lys Met Ile Thr Asn 725 730 Asn Pro His Leu Gln Lys Lys Arg Cys Ser Lys Lys Gly Leu Gly Arg 745 Ser Ile Met Arg Arg Ile Thr Glu Ile Pro Glu Thr Val Ser Arg Gln Cys Ser Lys Glu Asp Lys Glu Gly Ala Asp His Gly Thr Ala Lys Gly 775 780 Thr Ala Leu Ile Arg Lys Asn Pro Pro Glu Ser Ser Gly Asn Thr Gly 790 795 Lys Ser Lys Glu Glu Thr Leu Lys Asn Arg Val Phe Ser Leu Lys Lys 805 810 Ser His Ser Thr Tyr Asp His Val Arg Asp Gln Thr Glu Glu Ser Ser 825 820 Ser Leu Pro Thr Glu Ser Gln Glu Glu Glu Thr Thr Glu Asn Ser Thr 840 Leu Glu Ser Leu Ser Gly Lys Lys Leu Thr Gln Lys Leu Lys Glu Asp 860 855 Ser Glu Ala Glu Ser Thr Glu Ser Val Pro Leu Val Cys Lys Ser Ala 870 875 Ser Ala His Asn Leu Ser Ser Glu Lys Lys Thr Gly His Pro Arg Thr 885 890 Ser Met Leu Gln Lys Ser Leu Ser Val Ile Ala Ser Ala Lys Glu Lys 905 Thr Leu Gly Leu Ala Gly Lys Thr Gln Thr Ala Gly Val Glu Glu Arg 920 925 Thr Lys Ser Gln Lys Pro Leu Pro Lys Asp Lys Glu Thr Asn Arg Asn 935 940 His Ser Asn Ser Asp Asn Thr Glu Thr Lys Asp Pro Ala Pro Gln Asn 950 955 Ser Asn Pro Ala Glu Glu Pro Arg Lys Pro Gln Lys Ser Gly Ile Met 970 965 Lys Gln Gln Arg Val Asn Pro Thr Thr Ala Asn Ser Asp Leu Asn Pro 985 Gly Thr Thr Gln Met Lys Asp Asn Phe Asp Ile Gly Glu Val Cys Pro 1000 Trp Glu Val Tyr Asp Leu Thr Pro Gly Pro Val Pro Ser Glu Ser Lys 1015 1020 Val Gln Lys His Val Ser Ile Val Ala Ser Glu Met Glu Lys Asn Pro 1030 1035 Thr Phe Ser Leu Lys Glu Lys Ser His His Lys Pro Lys Ala Ala Glu

1045 1050 1055 Val Cys Gln Gln Ser Asn Gln Lys Arg Ile Asp Lys Ala Glu Val Cys 1065 1070 Leu Trp Glu Ser Gln Gly Gln Ser Ile Leu Glu Asp Glu Lys Leu Leu 1080 Ile Ser Lys Thr Pro Val Leu Pro Glu Arg Ala Lys Glu Glu Asn Gly 1100 1095 Gly Gln Pro Arg Ala Ala Asn Val Cys Ala Gly Gln Ser Glu Glu Leu 1110 1115 Pro Pro Lys Ala Val Ala Ser Lys Thr Glu Asn Glu Asn Leu Asn Gln 1125 1130 Ile Gly His Gln Glu Lys Lys Thr Ser Ser Glu Glu Asn Val Arg 1140 1145 1150 Gly Ser Tyr Asn Ser Ser Asn Asn Phe Gln Gln Pro Leu Thr Ser Arg 1160 1165 1155 Ala Glu Val Cys Pro Trp Glu Phe Glu Thr Pro Ala Gln Pro Asn Ala 1180 1175 Gly Arg Ser Val Ala Leu Pro Ala Ser Ser Ala Leu Ser Ala Asn Lys 1200 1185 1190 1195 Ile Ala Gly Pro Arg Lys Glu Glu Ile Trp Asp Ser Phe Lys Val 1205 1210 1215

<210> 3 <211> 1800 <212> DNA <213> Homo sapiens

<400> 3

atgggagcca tggcttaccc cttactcctc tgcctcctgc ttgctcagct gggattggga 60 120 gctqttqqcq ccaqccqcqa cccccaaqqa cqqccqqatt cccctcgaga gaggaccccg 180 aaggggaagc cgcacqccca qcaqccqqqt cqaqcctctq cctcqqactc ctcggctccc tggagccgct ccaccgatgg caccatcttg gcgcagaaac tcgccgagga ggtgcccatg 240 300 qacqtqqcct cttacctcta caccqgggac tcccaccagc tgaagcgagc caactgctcc 360 qqccqctacq aqttqqcqqq cctqccqqqq aagtqqccaq ccctqqccaq cqcqcacccc 420 teettgeace gggegetgga cacaetgaca caegecacea aetteeteaa egtgatgetg 480 cagagcaata agtcgcggga gcagaacttg caggacgacc tggattggta ccaggcgctg 540 qtqtqqaqcc ttctqqaqqq cqaqccaqc atctcccqqq cqgccatcac cttcaqcacc 600 qattcqctqt ccqcaccqqc cccacaqqtc ttcctccaqq ccacqcqcqa ggagaqccqc 660 atcctqctcc aaqacctqtc ctcctccqca ccccacctgg ccaacgccac tctggagacc 720 gagtggttcc acggcctccg gcgcaagtgg aggccccact tacaccgccg cggccccaat 780 caggggcccc ggggcctggg ccacagctgg cggcgcaagg acgggctcgg cggggacaag 840 agccacttca agtggtctcc gccttatctg gagtgcgaga acgggagtta caagcccggg 900 tggctggtta ctctttcctc tgccatctac gggttgcagc ctaacctggt cccggaattc 960 aggggtgtca tgaaagttga cataaatctt cagaaagtgg acattgacca atgctcaagt 1020 gatggctggt tttcaggaac tcataaatgc cacctcaaca attcagagtg tatgccaatt 1080 aaaggcctag gattcgttct tggagcctat gagtgcattt gcaaagcagg attctatcat 1140 cctggagtct taccagtgaa caactttcgg agaaggggtc cggatcagca tatttcagga 1200 agtacaaaag atgtgtcaga agaagcctat gtctgcctac cttgcaggga gggctgcccc 1260 ttctgtgctg atgacagccc atgcttcgtc caggaagata agtatttacg acttgccatc atctccttcc aaggcctgtg tatgctgctc gacttcgtta gcatgctggt ggtctaccac 1320 1380 tttcgcaaag caaagagcat ccgggcatcg ggccttatcc tgttggaaac gatccttttt 1440 qqatctctqc tcctatactt tccagttgtt attttgtact ttgagccaag cacatttcgc tgtattctcc taagatgggc tcgtcttctc ggttttgcta ctgtttacgg aactgtcact 1500 ctcaaacttc acagggtttt gaaggtgttt ctttcacgaa cggctcaacg aattccatat 1560 1620 atqactqqcq qacqqqtcat qaqqatqctq qcaqtaatac tcttggtagt gttttggttt 1680 ctcattggct ggacttcatc tgtgtgccag aatttggaga aacagatttc acttattggc





caggggaaaa catccgatca cctcatcttc aatatgtgcc tcattgaccg ctgggactac atgacagcag ttggtatgtg gtcacttgtt tcgtatgatg gtcttaccat ttttcagtag

1740

<210> 4 <211> 599 <212> PRT <213> Homo sapiens

<400> 4

 $(c_{i,j}, \mathcal{S}_{i,j}, c_{i,j}, c_{i,j}) = (c_{i,j}, c_{i,j}, c_{$

Met Gly Ala Met Ala Tyr Pro Leu Leu Cys Leu Leu Leu Ala Gln 20

55

Asp Val Ala Ser Tyr Leu Tyr Thr Gly Asp Ser His Gln Leu Lys Arg 85

100

165

325

345 Ile Cys Lys Ala Gly Phe Tyr His Pro Gly Val Leu Pro Val Asn Asn 360 Phe Arg Arg Gly Pro Asp Gln His Ile Ser Gly Ser Thr Lys Asp

Leu Gly Leu Gly Ala Val Gly Ala Ser Arg Asp Pro Gln Gly Arg Pro 25

Asp Ser Pro Arg Glu Arg Thr Pro Lys Gly Lys Pro His Ala Gln Gln 40

Pro Gly Arg Ala Ser Ala Ser Asp Ser Ser Ala Pro Trp Ser Arg Ser

Thr Asp Gly Thr Ile Leu Ala Gln Lys Leu Ala Glu Glu Val Pro Met 75

Ala Asn Cys Ser Gly Arg Tyr Glu Leu Ala Gly Leu Pro Gly Lys Trp

105 Pro Ala Leu Ala Ser Ala His Pro Ser Leu His Arg Ala Leu Asp Thr

120 Leu Thr His Ala Thr Asn Phe Leu Asn Val Met Leu Gln Ser Asn Lys

140 135 Ser Arg Glu Gln Asn Leu Gln Asp Asp Leu Asp Trp Tyr Gln Ala Leu

150 155 Val Trp Ser Leu Leu Glu Gly Glu Pro Ser Ile Ser Arg Ala Ala Ile

170 Thr Phe Ser Thr Asp Ser Leu Ser Ala Pro Ala Pro Gln Val Phe Leu 185

Gln Ala Thr Arg Glu Glu Ser Arg Ile Leu Leu Gln Asp Leu Ser Ser 200

Ser Ala Pro His Leu Ala Asn Ala Thr Leu Glu Thr Glu Trp Phe His 220 215

Gly Leu Arg Arg Lys Trp Arg Pro His Leu His Arg Arg Gly Pro Asn 230 235

Gln Gly Pro Arg Gly Leu Gly His Ser Trp Arg Arg Lys Asp Gly Leu

250 245 Gly Gly Asp Lys Ser His Phe Lys Trp Ser Pro Pro Tyr Leu Glu Cys 265

Glu Asn Gly Ser Tyr Lys Pro Gly Trp Leu Val Thr Leu Ser Ser Ala 280

Ile Tyr Gly Leu Gln Pro Asn Leu Val Pro Glu Phe Arg Gly Val Met 295

Lys Val Asp Ile Asn Leu Gln Lys Val Asp Ile Asp Gln Cys Ser Ser 315 Asp Gly Trp Phe Ser Gly Thr His Lys Cys His Leu Asn Asn Ser Glu

330 Cys Met Pro Ile Lys Gly Leu Gly Phe Val Leu Gly Ala Tyr Glu Cys





	370					375					380				
Val 385	Ser	Glu	Glu	Ala	Tyr 390	Val	Cys	Leu	Pro	Cys 395	Arg	Glu	Gly	Cys	Pro 400
Phe	Cys	Ala	Asp	Asp 405	Ser	Pro	Cys	Phe	Val 410	Gln	Glu	Asp	Lys	Tyr 415	Leu
Arg	Leu	Ala	Ile 420	Ile	Ser	Phe	Gln	Gly 425	Leu	Cys	Met	Leu	Leu 430	Asp	Phe
Val	Ser	Met 435	Leu	Val	Val	Tyr	His 440	Phe	Arg	Lys	Ala	Lys 445	Ser	Ile	Arg
Ala	Ser 450	Gly	Leu	Ile	Leu	Leu 455	Glu	Thr	Ile	Leu	Phe 460	Gly	Ser	Leu	Leu
Leu 465	Tyr	Phe	Pro	Val	Val 470	Ile	Leu	Tyr	Phe	Glu 475		Ser	Thr	Phe	Arg 480
Cys	Ile	Leu	Leu	Arg 485	Trp	Ala	Arg	Leu	Leu 490	Gly	Phe	Ala	Thr	Val 495	Tyr
Gly	Thr	Val	Thr 500	Leu	Lys	Leu	His	Arg 505	Val	Leu	Lys	Val	Phe 510	Leu	Ser
Arg	Thr	Ala 515	Gln	Arg	Ile	Pro	Tyr 520	Met	Thr	Gly	Gly	Arg 525	Val	Met	Arg
Met	Leu 530	Ala	Val	Ile	Leu	Leu 535	Val	Val	Phe	Trp	Phe 540	Leu	Ile	Gly	Trp
Thr 545	Ser	Ser	Val	Cys	Gln 550	Asn	Leu	Glu	Lys	Gln 555	Ile	Ser	Leu	Ile	Gly 560
Gln	Gly	Lys	Thr	Ser 565	Asp	His	Leu	Ile	Phe 570	Asn	Met	Суѕ	Leu	Ile 575	Asp
Arg	Trp	Asp	Tyr 580	Met	Thr	Ala	Val	Gly 585	Met	Trp	Ser	Leu	Val 590	Ser	Tyr
Asp	Gly	Leu 595	Thr	Ile	Phe	Gln									

<210> 5

<211> 7148

<212> DNA

<213> Homo sapiens

<400> 5

1100/						
ggtgagacta	tgragcagcg	tcttcggcgg	ccgcggcggc	agcagcagca	gcagcttctg	60
aacgcgcctc	aatgagagcg	gcggtggcgg	cagccgggcc	gagagacgga	ctcgggctga	120
ctccagccgc	tgggagcgcg	aggccatgta	acccgctcgg	ctccaggctg	cgaggtgcgt	180
aatccccagc	cggcccctcg	cgcagcgggc	acggccagcg	ctgccacagg	tgacttgatt	240
tctgcgacgg	tagcttagcc	acccggggcc	aatctcgaaa	cattcttatt	ttcaagtcct	300
ttggactggg	tgccatctgg	agaaggggga	agactcctcg	aaaaagtctg	actgttgaga	360
aactgacgat	ccaaatttaa	aaagtgattc	ccccctccc	gttccctcct	cttctctctg	420
ggaggcagat	gggagccatg	gcttacccct	tactcctctg	cctcctgctt	gctcagctgg	480
gattgggagc	tgttggcgcc	agccgcgacc	cccaaggacg	gccggattcc	cctcgagaga	540
ggaccccgaa	ggggaagccg	cacgcccagc	agccgggtcg	agcctctgcc	tcggactcct	600
cggctccctg	gagccgctcc	accgatggca	ccatcttggc	gcagaaactc	gccgaggagg	660
tgcccatgga	cgtggcctct	tacctctaca	ccggggactc	ccaccagctg	aagcgagcca	720
actgctccgg	ccgctacgag	ttggcgggcc	tgccggggaa	gtggccagcc	ctggccagcg	780
cgcacccctc	cttgcaccgg	gcgctggaca	cactgacaca	cgccaccaac	ttcctcaacg	840
tgatgctgca	gagcaataag	tcgcgggagc	agaacttgca	ggacgacctg	gattggtacc	900
aggcgctggt	gtggagcctt	ctggagggcg	agcccagcat	ctcccgggcg	gccatcacct	960
tcagcaccga	ttcgctgtcc	gcaccggccc	cacaggtctt	cctccaggcc	acgcgcgagg	1020
agagccgcat	cctgctccaa	gacctgtcct	cctccgcacc	ccacctggcc	aacgccactc	1080
tggagaccga	gtggttccac	ggcctccggc	gcaagtggag	gccccactta	caccgccgcg	1140
gccccaatca	ggggccccgg	ggcctgggcc	acagctggcg	gcgcaaggac	gggctcggcg	1200





	ccacttcaag					1260
	gctggttact					1320
cggaattcag	gggtgtcatg	aaagttgaca	taaatcttca	gaaagtggac	attgaccaat	1380
	tggctggttt					1440
tgccaattaa	aggcctagga	ttcgttcttg	gagcctatga	gtgcatttgc	aaagcaggat	1500
tctatcatcc	tggagtctta	ccagtgaaca	actttcggag	aaggggtccg	gatcagcata	1560
tttcaggaag	tacaaaagat	gtgtcagaag	aagcctatgt	ctgcctacct	tgcagggagg	1620
gctgcccctt	ctgtgctgat	gacagcccat	gcttcgtcca	ggaagataag	tatttacgac	1680
ttgccatcat	ctccttccaa	ggcctgtgta	tgctgctcga	cttcgttagc	atgctggtgg	1740
tctaccactt	tcgcaaagca	aagagcatcc	gggcatcggg	ccttatcctg	ttggaaacga	1800
	atctctgctc					1860
	tattctccta					1920
	caaacttcac					1980
	gactggcgga					2040
	cattggctgg					2100
	ggggaaaaca					2160
	gacagcagtt					2220
	ttacaactga					2280
	cctactgaat					2340
	ccatcggcat					2400
	tctgctatat					2460
	ttgatgctgt					2520
	attccaaagt					2580
	gaggatgagc					2640
	tggagtgagc					2700
	caactggaaa					2760
	cggtgctcga					2820
	acagtcagcc					2880
	ggcactgccc					2940
	gaggagaccc					3000
	gtgagagacc					3060
	acagaaaatt					3120
	gacagcgagg					3180
	aacctcagct					3240
	agtgtcatag					3300
	ggtgtggaag					3360
	aatcactcaa					3420
	gcggaggagc					3480
	accactgcca					3540
	ggggaggtgt					3600
	aaagttcaaa					3660
	ttaaaggaga					3720
	aagcgcatag					3780
	gatgagaagc					3840
	ggaggtcagc					3900
	gctgtagcat					3960
	acatcttctt					4020
	cctttaacat					4080
	gctggaagaa					4140
	cctaggaaag					4200
	aaggagggaa					4260
	aggatttgtc					4320
	aagaggacca					4380
	aaagtccttc					4440
	agcccacaat					4500
	gtaaaccagg					4560
cccaagccag	geadaccagg	agacacagaa	5209040049			





	tataagacat	atataactga	aattctaagt	agctgaccga	gaagaactta	ctttacctat	4620
	ttaaccttga	tagcactgct	aacttaatgc	atcccaaaaa	tatctttat	attaatgatt	4680
	gctctcattt	tcttataaat	gtatgtttca	gtatatcgtt	gtgtctcata	ttcaagcatt	4740
	ccagattgta	taatttttgc	aaataacttt	ggtattatgt	gacacaacac	atttatgcaa	4800
	tctgcagcta	ttcaattgtt	attgcacctt	acagaatacc	tgctatctat	caactttagt	4860
	tgattcttga	agtacagtaa	gctttctctg	gcttgggaag	ccataactgt	tactataaaa	4920
	acttttagtt	ttggctgtgg	tttatatatt	gtgactttga	atttgactct	attatttcac	4980
	atcatggttt	gttatactgt	cttaatcagg	gttttttata	caagttgagt	tacttgtttt	5040
	gcacttcttg	ttaggactca	gaagctttat	taatattgga	gatcaagtgg	tcctacttag	5100
			aggacaactt				5160
			attgtccctt				5220
			aagagtgaga				5280
			tgacataaga				5340
	tgcctttcaa	aaaaaaaca	caggtagctc	ctgatagcac	tttcaaggga	ttatttttt	5400
	aaagagaaaa	attatggtag	catcaagatc	attgtatgga	tatatttta	ttatgtgtac	5460
			ataccttaaa				5520
			tgctgggctc				5580
			tatggaatct				5640
			gagccacttg				5700
			gcatatttta				5760
			gccgactaag				5820
			tttaaagaag				5880
	tttttctccc	tgtaaacacc	caagtatcaa	ctgcttattt	ggccaggaca	ctcccagcac	5940
			acaagcggca				6000
			gatatagggc				6060
			tcatcatcaa				6120
	taagcaagca	cttcactgtt	tcacaaagct	gtgcgcaaat	cttcctcacc	catttgctga	6180
			ggtggggtcg				6240
			cttttatctc				6300
	tgacctcctt	taaggaatct	ttgtgaattg	ggttggaagt	tcctagaccc	acatatttgt	6360
	ttcatttatg	tctgaaatct	gttagcactt	gattcctttc	ttgagaatta	tgcagtcaag	6420
	catcagtgac	tttctattgc	acttcaggat	tgatcctgct	agagatgtga	gttaaaaaga	6480
٠	cttgccaaat	tatatcttag	cgacattcta	tagttcatag	attattctcc	accagcataa	6540
	atcagtgaga	gtgcctagag	tctttctgag	agtttcattg	ccattatcaa	caagagaagt	6600
	tgaaatttac	aagtcaggag	gttattttc	cagattgata	accatagaaa	gtgaataaac	6660
			ttgctaggtt				6720
	ctgtccttgt	ttttaagcca	gggtttataa	ataagtagat	ttataccaat	cttaatagaa	6780
			ttaaatgctt				6840
			atttgaaact				6900
	ttctgcatgc	aagttatgac	aggtaggact	gaaaaaacac	tgccttttga	cttctagcat	6960
			agtcaataaa				7020
			aacctacagc				7080
			gtaaataatt				7140
	tgaaagtg						7148